In the Claims

1-36 (Canceled)

37. (New) A composition of matter comprising an antagonist of CXCR3-binding CXC chemokines consisting of mutants of CXCL11, CXCL10, or CXCL9 in which:

a) at least one of the following basic residues of, numbered on the sequence of human mature CXCL11, is substituted to Alanine, Glycine, Serine, Threonine, Proline, Glutamic Acid, Glutamine, Aspartic Acid, or Asparagine: 46, 62, 66, or 70;

b) at least one of the following basic residues, numbered on the sequence of human mature CXCL11, is substituted to Alanine, Glycine, Serine, Threonine, Proline, Glutamic Acid, Glutamine, Aspartic Acid, or Asparagine: 46, 62, 66, or 70 and at least one of the following basic residues, numbered on the sequence of human mature CXCL11, is additionally substituted to Alanine, Glycine, Serine, Threonine, Proline, Glutamic Acid, Glutamine, Aspartic Acid, or Asparagine: 49, 52, 57, 59, 67, or 71;

c) one of the following combinations of basic residues, numbered on the sequence of human mature CXCL11, is substituted to Alanine, Glycine, Serine, Threonine, Proline, Glutamic Acid, Glutamine, Aspartic Acid, or Asparagine:

   i) 46, together with residue 49; residue 52; or residues 49 and 52;

   ii) 62, together with residue 57; residue 59; or residues 57 and 59;

   iii) 66 and 70, together with residue 67; residue 71; or residues 67 and 71; or

   iv) 62 and 66, together with one or more of the following residues: 57, 59, 67, 70, or 71;

d) at least one of the following basic residues, numbered on the sequence of human mature CXCL11, of an antagonist set forth in b) or c) is additionally substituted to Alanine, Glycine, Serine, Threonine, Proline, Glutamic Acid, Glutamine, Aspartic Acid, or Asparagine: 5, 6, 8, 17, 20, 26 or 38;

e) the CXCR3-binding CXC chemokine is human CXCL10 and at least one of the following basic residues, numbered on the sequence of human mature CXCL11, is

additionally substituted to Alanine, Glycine, Serine, Threonine, Proline, Glutamic Acid, Glutamine, Aspartic Acid, or Asparagine: 47, 48, 51, 52, 59, 74, or 75;

f) at least one of the following basic residues of, numbered on the sequence of human mature CXCL11, is substituted to Alanine, Glycine, Serine, Threonine, Proline, Glutamic Acid, Glutamine, Aspartic Acid, or Asparagine: 46, 62, 66, or 70 and the CXCR3-binding CXC chemokine is human CXCL10 and at least one of the following basic residues, numbered on the sequence of human mature CXCL11, is additionally substituted to Alanine, Glycine, Serine, Threonine, Proline, Glutamic Acid, Glutamine, Aspartic Acid, or Asparagine: 47, 48, 51, 52, 59, 74, or 75;

g) an antagonist of f) has one of the following combinations of basic residues, numbered on the sequence of human mature CXCL11, is substituted to Alanine, Glycine, Serine, Threonine, Proline, Glutamic Acid, Glutamine, Aspartic Acid, or Asparagine:

i) residues 46 and 52, together with residue 47, 48, or 51;

ii) residues 59 and 62;

iii) residues 66 and 70, together with residue 74; residue 75; or both residues 74 and 75; or

iv) residues 62 and 66, together with residue 59; residue 70; or both residues 59 and 70;

h) an antagonist of f) or g) has at least one of the following basic residues, numbered on the sequence of human mature CXCL11, is additionally substituted to Alanine, Glycine, Serine, Threonine, Proline, Glutamic Acid, Glutamine, Aspartic Acid, or Asparagine: 5, 8, 22, 26, or 38;

i) at least one of the following basic residues of, numbered on the sequence of human mature CXCL11, is substituted to Alanine, Glycine, Serine, Threonine, Proline, Glutamic Acid, Glutamine, Aspartic Acid, or Asparagine: 46, 62, 66, or 70 the CXCR3-binding CXC chemokines is human CXCL9 and basic residue 67, numbered on the sequence of human mature CXCL11, is additionally substituted to Alanine, Glycine, Serine, Threonine, Proline, Glutamic Acid, Glutamine, Aspartic Acid, or Asparagine;

j) an antagonist as set forth in i) has the following combinations of basic residues, numbered on the sequence of human mature CXCL11, substituted to Alanine, Glycine, Serine, Threonine, Proline, Glutamic Acid, Glutamine, Aspartic Acid, or Asparagine:

i) residue 62, together with residue 66; residue 67; or both residues 66 and 67;

ii) residues 66 and 67; or

iii) residues 66 and 70, together with one or more of the following: 67, 74, or 75;

k) the antagonist as set forth in i) or j) wherein at least one of the following basic residues, numbered on the sequence of human mature CXCL11, is additionally substituted to Alanine, Glycine, Serine, Threonine, Proline, Glutamic Acid, Glutamine, Aspartic Acid, or Asparagine: 5, 6, 8, 25, 28, or 38.

l) the basic residues of an antagonist as set forth in a), b), c), d), e), f), g), h), i), j), or k) is substituted with Alanine or Glycine;

m) said antagonist comprises CXCL11-2B3 (SEQ ID NO: 3), CXCL11-3B3 (SEQ ID NO: 4), or CXCL11-4B4 (SEQ ID NO: 5);

n) an antagonist as set forth in a), b), c), d), e), f), g), h), i), j), k), l) or m) wherein one or more amino acids that have been added, deleted, or substituted belong to the first nine amino acids in the amino-terminal domain of the human mature CXCR3-binding CXC chemokine;

o) an antagonist as set forth in a), b), c), d), e), f), g), h), i), j), k), l), m) or n) one or more amino acids have been mutated to decrease the aggregation properties of said antagonist;

p) said antagonist comprises a peptide mimetic designed on the sequence, structure or both sequence and structure of an antagonist as set forth in a), b), c), d), e), f), g), h), i), j), k), l), m), n) or o); or

q) said antagonist is an active fraction, precursor, salt, or derivative of an antagonists of CXCR3-binding CXC chemokines as set forth in an antagonist as set forth in a), b), c), d), e), f), g), h), i), j), k), l), m), n), o) or p).

38 (New). The composition of matter according to claim 37, further comprising: a) an amino acid sequence belonging to a protein sequence other than the corresponding CXCR3-binding CXC chemokine; or b) a molecule to which said antagonist is complexed or conjugated.

39 (New). The composition of matter according to claim 38, wherein said amino acid sequence is selected from one or more of these protein sequences: extracellular domains of membrane-bound protein, immunoglobulin constant region, multimerization domains, extracellular proteins, signal peptide-containing proteins, or export signal-containing proteins.

40 (New). The composition of matter according to claim 38, wherein said antagonist is complexed or conjugated to a molecule chosen from radioactive labels, biotin, fluorescent labels, cytotoxic agents, or drug delivery agents.

41 (New). The composition of matter according to claim 37, further comprising a pharmaceutically acceptable carrier.

42 (New). The composition of matter according to claim 38, further comprising a pharmaceutically acceptable carrier.

43 (New). A composition of matter comprising a nucleic acid sequence encoding an antagonist of CXCR3-binding CXC chemokines consisting of mutants of CXCL11, CXCL10, or CXCL9 in which:

a) at least one of the following basic residues of, numbered on the sequence of human mature CXCL11, is substituted to Alanine, Glycine, Serine, Threonine, Proline, Glutamic Acid, Glutamine, Aspartic Acid, or Asparagine: 46, 62, 66, or 70;

b) at least one of the following basic residues, numbered on the sequence of human mature CXCL11, is substituted to Alanine, Glycine, Serine, Threonine, Proline, Glutamic Acid, Glutamine, Aspartic Acid, or Asparagine: 46, 62, 66, or 70 and at least one of the following basic residues, numbered on the sequence of human mature

CXCL11, is additionally substituted to Alanine, Glycine, Serine, Threonine, Proline, Glutamic Acid, Glutamine, Aspartic Acid, or Asparagine: 49, 52, 57, 59, 67, or 71;

c) one of the following combinations of basic residues, numbered on the sequence of human mature CXCL11, is substituted to Alanine, Glycine, Serine, Threonine, Proline, Glutamic Acid, Glutamine, Aspartic Acid, or Asparagine:

i) 46, together with residue 49; residue 52; or residues 49 and 52;

ii) 62, together with residue 57; residue 59; or residues 57 and 59;

iii) 66 and 70, together with residue 67; residue 71; or residues 67 and 71; or

iv) 62 and 66, together with one or more of the following residues: 57, 59, 67, 70, or 71;

d) at least one of the following basic residues, numbered on the sequence of human mature CXCL11, of an antagonist set forth in b) or c) is additionally substituted to Alanine, Glycine, Serine, Threonine, Proline, Glutamic Acid, Glutamine, Aspartic Acid, or Asparagine: 5, 6, 8, 17, 20, 26 or 38;

e) the CXCR3-binding CXC chemokine is human CXCL10 and at least one of the following basic residues, numbered on the sequence of human mature CXCL11, is additionally substituted to Alanine, Glycine, Serine, Threonine, Proline, Glutamic Acid, Glutamine, Aspartic Acid, or Asparagine: 47, 48, 51, 52, 59, 74, or 75;

f) at least one of the following basic residues of, numbered on the sequence of human mature CXCL11, is substituted to Alanine, Glycine, Serine, Threonine, Proline, Glutamic Acid, Glutamine, Aspartic Acid, or Asparagine: 46, 62, 66, or 70 and the CXCR3-binding CXC chemokine is human CXCL10 and at least one of the following basic residues, numbered on the sequence of human mature CXCL11, is additionally substituted to Alanine, Glycine, Serine, Threonine, Proline, Glutamic Acid, Glutamine, Aspartic Acid, or Asparagine: 47, 48, 51, 52, 59, 74, or 75;

g) an antagonist of f) has one of the following combinations of basic residues, numbered on the sequence of human mature CXCL11, is substituted to Alanine, Glycine, Serine, Threonine, Proline, Glutamic Acid, Glutamine, Aspartic Acid, or Asparagine:

i) residues 46 and 52, together with residue 47, 48, or 51;

ii) residues 59 and 62;

iii) residues 66 and 70, together with residue 74; residue 75; or both residues 74 and 75; or

iv) residues 62 and 66, together with residue 59; residue 70; or both residues 59 and 70;

h) an antagonist of f) or g) has at least one of the following basic residues, numbered on the sequence of human mature CXCL11, is additionally substituted to Alanine, Glycine, Serine, Threonine, Proline, Glutamic Acid, Glutamine, Aspartic Acid, or Asparagine: 5, 8, 22, 26, or 38;

i) at least one of the following basic residues of, numbered on the sequence of human mature CXCL11, is substituted to Alanine, Glycine, Serine, Threonine, Proline, Glutamic Acid, Glutamine, Aspartic Acid, or Asparagine: 46, 62, 66, or 70 the CXCR3-binding CXC chemokines is human CXCL9 and basic residue 67, numbered on the sequence of human mature CXCL11, is additionally substituted to Alanine, Glycine, Serine, Threonine, Proline, Glutamic Acid, Glutamine, Aspartic Acid, or Asparagine;

j) an antagonist as set forth in i) has the following combinations of basic residues, numbered on the sequence of human mature CXCL11, substituted to Alanine, Glycine, Serine, Threonine, Proline, Glutamic Acid, Glutamine, Aspartic Acid, or Asparagine:

i) residue 62, together with residue 66; residue 67; or both residues 66 and 67;

ii) residues 66 and 67; or

iii) residues 66 and 70, together with one or more of the following: 67, 74, or 75;

k) the antagonist as set forth in i) or j) wherein at least one of the following basic residues, numbered on the sequence of human mature CXCL11, is additionally substituted to Alanine, Glycine, Serine, Threonine, Proline, Glutamic Acid, Glutamine, Aspartic Acid, or Asparagine: 5, 6, 8, 25, 28, or 38.

l) the basic residues of an antagonist as set forth in a), b), c), d), e), f), g), h), i), j), or k) is substituted with Alanine or Glycine;

m) said antagonist comprises CXCL11-2B3 (SEQ ID NO: 3), CXCL11-3B3 (SEQ ID NO: 4), or CXCL11-4B4 (SEQ ID NO: 5);

n) an antagonist as set forth in a), b), c), d), e), f), g), h), i), j), k), l) or m) wherein one or more amino acids that have been added, deleted, or substituted belong to the first nine amino acids in the amino-terminal domain of the human mature CXCR3-binding CXC chemokine;

o) an antagonist as set forth in a), b), c), d), e), f), g), h), i), j), k), l), m) or n) one or more amino acids have been mutated to decrease the aggregation properties of said antagonist; or

p) said antagonist comprises a peptide mimetic designed on the sequence, structure or both sequence and structure of an antagonist as set forth in a), b), c), d), e), f), g), h), i), j), k), l), m), n) or o).

44 (New). The composition matter according to claim 43, wherein said composition of matter comprises expression vector comprising a nucleic acid sequence encoding an antagonist of CXCR3-binding CXC chemokines consisting of mutants of CXCL11, CXCL10, or CXCL9 in which:

a) at least one of the following basic residues of, numbered on the sequence of human mature CXCL11, is substituted to Alanine, Glycine, Serine, Threonine, Proline, Glutamic Acid, Glutamine, Aspartic Acid, or Asparagine: 46, 62, 66, or 70;

b) at least one of the following basic residues, numbered on the sequence of human mature CXCL11, is substituted to Alanine, Glycine, Serine, Threonine, Proline, Glutamic Acid, Glutamine, Aspartic Acid, or Asparagine: 46, 62, 66, or 70 and at least one of the following basic residues, numbered on the sequence of human mature CXCL11, is additionally substituted to Alanine, Glycine, Serine, Threonine, Proline, Glutamic Acid, Glutamine, Aspartic Acid, or Asparagine: 49, 52, 57, 59, 67, or 71;

c) one of the following combinations of basic residues, numbered on the sequence of human mature CXCL11, is substituted to Alanine, Glycine, Serine, Threonine, Proline, Glutamic Acid, Glutamine, Aspartic Acid, or Asparagine:

i) 46, together with residue 49; residue 52; or residues 49 and 52;

ii) 62, together with residue 57; residue 59; or residues 57 and 59;

iii) 66 and 70, together with residue 67; residue 71; or residues 67 and 71; or

iv) 62 and 66, together with one or more of the following residues: 57, 59, 67, 70, or 71;

d) at least one of the following basic residues, numbered on the sequence of human mature CXCL11, of an antagonist set forth in b) or c) is additionally substituted to Alanine, Glycine, Serine, Threonine, Proline, Glutamic Acid, Glutamine, Aspartic Acid, or Asparagine: 5, 6, 8, 17, 20, 26 or 38;

e) the CXCR3-binding CXC chemokine is human CXCL10 and at least one of the following basic residues, numbered on the sequence of human mature CXCL11, is additionally substituted to Alanine, Glycine, Serine, Threonine, Proline, Glutamic Acid, Glutamine, Aspartic Acid, or Asparagine: 47, 48, 51, 52, 59, 74, or 75;

f) at least one of the following basic residues of, numbered on the sequence of human mature CXCL11, is substituted to Alanine, Glycine, Serine, Threonine, Proline, Glutamic Acid, Glutamine, Aspartic Acid, or Asparagine: 46, 62, 66, or 70 and the CXCR3-binding CXC chemokine is human CXCL10 and at least one of the following basic residues, numbered on the sequence of human mature CXCL11, is additionally substituted to Alanine, Glycine, Serine, Threonine, Proline, Glutamic Acid, Glutamine, Aspartic Acid, or Asparagine: 47, 48, 51, 52, 59, 74, or 75;

g) an antagonist of f) has one of the following combinations of basic residues, numbered on the sequence of human mature CXCL11, is substituted to Alanine, Glycine, Serine, Threonine, Proline, Glutamic Acid, Glutamine, Aspartic Acid, or Asparagine:

i) residues 46 and 52, together with residue 47, 48, or 51;

ii) residues 59 and 62;

iii) residues 66 and 70, together with residue 74; residue 75; or both residues 74 and 75; or

iv) residues 62 and 66, together with residue 59; residue 70; or both residues 59 and 70;

h) an antagonist of f) or g) has at least one of the following basic residues, numbered on the sequence of human mature CXCL11, is additionally substituted to Alanine, Glycine, Serine, Threonine, Proline, Glutamic Acid, Glutamine, Aspartic Acid, or Asparagine: 5, 8, 22, 26, or 38;

i) at least one of the following basic residues of, numbered on the sequence of human mature CXCL11, is substituted to Alanine, Glycine, Serine, Threonine, Proline, Glutamic Acid, Glutamine, Aspartic Acid, or Asparagine: 46, 62, 66, or 70 the CXCR3-binding CXC chemokines is human CXCL9 and basic residue 67, numbered on the sequence of human mature CXCL11, is additionally substituted to Alanine, Glycine, Serine, Threonine, Proline, Glutamic Acid, Glutamine, Aspartic Acid, or Asparagine;

j) an antagonist as set forth in i) has the following combinations of basic residues, numbered on the sequence of human mature CXCL11, substituted to Alanine, Glycine, Serine, Threonine, Proline, Glutamic Acid, Glutamine, Aspartic Acid, or Asparagine:

   i) residue 62, together with residue 66; residue 67; or both residues 66 and 67;

   ii) residues 66 and 67; or

   iii) residues 66 and 70, together with one or more of the following: 67, 74, or 75;

k) the antagonist as set forth in i) or j) wherein at least one of the following basic residues, numbered on the sequence of human mature CXCL11, is additionally substituted to Alanine, Glycine, Serine, Threonine, Proline, Glutamic Acid, Glutamine, Aspartic Acid, or Asparagine: 5, 6, 8, 25, 28, or 38.

l) the basic residues of an antagonist as set forth in a), b), c), d), e), f), g), h), i), j), or k) is substituted with Alanine or Glycine;

m) said antagonist comprises CXCL11-2B3 (SEQ ID NO: 3), CXCL11-3B3 (SEQ ID NO: 4), or CXCL11-4B4 (SEQ ID NO: 5);

n) an antagonist as set forth in a), b), c), d), e), f), g), h), i), j), k), l) or m) wherein one or more amino acids that have been added, deleted, or substituted belong to the first

nine amino acids in the amino-terminal domain of the human mature CXCR3-binding CXC chemokine;

o) an antagonist as set forth in a), b), c), d), e), f), g), h), i), j), k), l), m) or n) one or more amino acids have been mutated to decrease the aggregation properties of said antagonist; or

p) said antagonist comprises a peptide mimetic designed on the sequence, structure or both sequence and structure of an antagonist as set forth in a), b), c), d), e), f), g), h), i), j), k), l), m), n) or o).

45 (New). The composition matter according to claim 43, wherein said composition of matter comprises a host cell comprising an expression vector comprising a nucleic acid sequence encoding an antagonist of CXCR3-binding CXC chemokines consisting of mutants of CXCL11, CXCL10, or CXCL9 in which:

a) at least one of the following basic residues of, numbered on the sequence of human mature CXCL11, is substituted to Alanine, Glycine, Serine, Threonine, Proline, Glutamic Acid, Glutamine, Aspartic Acid, or Asparagine: 46, 62, 66, or 70;

b) at least one of the following basic residues, numbered on the sequence of human mature CXCL11, is substituted to Alanine, Glycine, Serine, Threonine, Proline, Glutamic Acid, Glutamine, Aspartic Acid, or Asparagine: 46, 62, 66, or 70 and at least one of the following basic residues, numbered on the sequence of human mature CXCL11, is additionally substituted to Alanine, Glycine, Serine, Threonine, Proline, Glutamic Acid, Glutamine, Aspartic Acid, or Asparagine: 49, 52, 57, 59, 67, or 71;

c) one of the following combinations of basic residues, numbered on the sequence of human mature CXCL11, is substituted to Alanine, Glycine, Serine, Threonine, Proline, Glutamic Acid, Glutamine, Aspartic Acid, or Asparagine:

i) 46, together with residue 49; residue 52; or residues 49 and 52;

ii) 62, together with residue 57; residue 59; or residues 57 and 59;

iii) 66 and 70, together with residue 67; residue 71; or residues 67 and 71; or

iv) 62 and 66, together with one or more of the following residues: 57, 59, 67, 70, or 71;

d) at least one of the following basic residues, numbered on the sequence of human mature CXCL11, of an antagonist set forth in b) or c) is additionally substituted to Alanine, Glycine, Serine, Threonine, Proline, Glutamic Acid, Glutamine, Aspartic Acid, or Asparagine: 5, 6, 8, 17, 20, 26 or 38;

e) the CXCR3-binding CXC chemokine is human CXCL10 and at least one of the following basic residues, numbered on the sequence of human mature CXCL11, is additionally substituted to Alanine, Glycine, Serine, Threonine, Proline, Glutamic Acid, Glutamine, Aspartic Acid, or Asparagine: 47, 48, 51, 52, 59, 74, or 75;

f) at least one of the following basic residues of, numbered on the sequence of human mature CXCL11, is substituted to Alanine, Glycine, Serine, Threonine, Proline, Glutamic Acid, Glutamine, Aspartic Acid, or Asparagine: 46, 62, 66, or 70 and the CXCR3-binding CXC chemokine is human CXCL10 and at least one of the following basic residues, numbered on the sequence of human mature CXCL11, is additionally substituted to Alanine, Glycine, Serine, Threonine, Proline, Glutamic Acid, Glutamine, Aspartic Acid, or Asparagine: 47, 48, 51, 52, 59, 74, or 75;

g) an antagonist of f) has one of the following combinations of basic residues, numbered on the sequence of human mature CXCL11, is substituted to Alanine, Glycine, Serine, Threonine, Proline, Glutamic Acid, Glutamine, Aspartic Acid, or Asparagine:

i) residues 46 and 52, together with residue 47, 48, or 51;

ii) residues 59 and 62;

iii) residues 66 and 70, together with residue 74; residue 75; or both residues 74 and 75; or

iv) residues 62 and 66, together with residue 59; residue 70; or both residues 59 and 70;

h) an antagonist of f) or g) has at least one of the following basic residues, numbered on the sequence of human mature CXCL11, is additionally substituted to Alanine,

Glycine, Serine, Threonine, Proline, Glutamic Acid, Glutamine, Aspartic Acid, or Asparagine: 5, 8, 22, 26, or 38;

i) at least one of the following basic residues of, numbered on the sequence of human mature CXCL11, is substituted to Alanine, Glycine, Serine, Threonine, Proline, Glutamic Acid, Glutamine, Aspartic Acid, or Asparagine: 46, 62, 66, or 70 the CXCR3-binding CXC chemokines is human CXCL9 and basic residue 67, numbered on the sequence of human mature CXCL11, is additionally substituted to Alanine, Glycine, Serine, Threonine, Proline, Glutamic Acid, Glutamine, Aspartic Acid, or Asparagine;

j) an antagonist as set forth in i) has the following combinations of basic residues, numbered on the sequence of human mature CXCL11, substituted to Alanine, Glycine, Serine, Threonine, Proline, Glutamic Acid, Glutamine, Aspartic Acid, or Asparagine:

  i) residue 62, together with residue 66; residue 67; or both residues 66 and 67;

  ii) residues 66 and 67; or

  iii) residues 66 and 70, together with one or more of the following: 67, 74, or 75;

k) the antagonist as set forth in i) or j) wherein at least one of the following basic residues, numbered on the sequence of human mature CXCL11, is additionally substituted to Alanine, Glycine, Serine, Threonine, Proline, Glutamic Acid, Glutamine, Aspartic Acid, or Asparagine: 5, 6, 8, 25, 28, or 38.

l) the basic residues of an antagonist as set forth in a), b), c), d), e), f), g), h), i), j), or k) is substituted with Alanine or Glycine;

m) said antagonist comprises CXCL11-2B3 (SEQ ID NO: 3), CXCL11-3B3 (SEQ ID NO: 4), or CXCL11-4B4 (SEQ ID NO: 5);

n) an antagonist as set forth in a), b), c), d), e), f), g), h), i), j), k), l) or m) wherein one or more amino acids that have been added, deleted, or substituted belong to the first nine amino acids in the amino-terminal domain of the human mature CXCR3-binding CXC chemokine;

o) an antagonist as set forth in a), b), c), d), e), f), g), h), i), j), k), l), m) or n) one or more amino acids have been mutated to decrease the aggregation properties of said antagonist; or

p) said antagonist comprises a peptide mimetic designed on the sequence, structure or both sequence and structure of an antagonist as set forth in a), b), c), d), e), f), g), h), i), j), k), l), m), n) or o).

46 (New). A method of treating a disease comprising the administration of a composition comprising a pharmaceutically acceptable carrier and active ingredient to an individual.

47 (New). The method according to claim 46, wherein said active ingredient is an antagonist of CXCR3-binding CXC chemokines consisting of mutants of CXCL11, CXCL10, or CXCL9 in which:

a) at least one of the following basic residues of, numbered on the sequence of human mature CXCL11, is substituted to Alanine, Glycine, Serine, Threonine, Proline, Glutamic Acid, Glutamine, Aspartic Acid, or Asparagine: 46, 62, 66, or 70;

b) at least one of the following basic residues, numbered on the sequence of human mature CXCL11, is substituted to Alanine, Glycine, Serine, Threonine, Proline, Glutamic Acid, Glutamine, Aspartic Acid, or Asparagine: 46, 62, 66, or 70 and at least one of the following basic residues, numbered on the sequence of human mature CXCL11, is additionally substituted to Alanine, Glycine, Serine, Threonine, Proline, Glutamic Acid, Glutamine, Aspartic Acid, or Asparagine: 49, 52, 57, 59, 67, or 71;

c) one of the following combinations of basic residues, numbered on the sequence of human mature CXCL11, is substituted to Alanine, Glycine, Serine, Threonine, Proline, Glutamic Acid, Glutamine, Aspartic Acid, or Asparagine:

i) 46, together with residue 49; residue 52; or residues 49 and 52;

ii) 62, together with residue 57; residue 59; or residues 57 and 59;

iii) 66 and 70, together with residue 67; residue 71; or residues 67 and 71; or

iv) 62 and 66, together with one or more of the following residues: 57, 59, 67, 70, or 71;

d) at least one of the following basic residues, numbered on the sequence of human mature CXCL11, of an antagonist set forth in b) or c) is additionally substituted to Alanine, Glycine, Serine, Threonine, Proline, Glutamic Acid, Glutamine, Aspartic Acid, or Asparagine: 5, 6, 8, 17, 20, 26 or 38;

e) the CXCR3-binding CXC chemokine is human CXCL10 and at least one of the following basic residues, numbered on the sequence of human mature CXCL11, is additionally substituted to Alanine, Glycine, Serine, Threonine, Proline, Glutamic Acid, Glutamine, Aspartic Acid, or Asparagine: 47, 48, 51, 52, 59, 74, or 75;

f) at least one of the following basic residues of, numbered on the sequence of human mature CXCL11, is substituted to Alanine, Glycine, Serine, Threonine, Proline, Glutamic Acid, Glutamine, Aspartic Acid, or Asparagine: 46, 62, 66, or 70 and the CXCR3-binding CXC chemokine is human CXCL10 and at least one of the following basic residues, numbered on the sequence of human mature CXCL11, is additionally substituted to Alanine, Glycine, Serine, Threonine, Proline, Glutamic Acid, Glutamine, Aspartic Acid, or Asparagine: 47, 48, 51, 52, 59, 74, or 75;

g) an antagonist of f) has one of the following combinations of basic residues, numbered on the sequence of human mature CXCL11, is substituted to Alanine, Glycine, Serine, Threonine, Proline, Glutamic Acid, Glutamine, Aspartic Acid, or Asparagine:

i) residues 46 and 52, together with residue 47, 48, or 51;

ii) residues 59 and 62;

iii) residues 66 and 70, together with residue 74; residue 75; or both residues 74 and 75; or

iv) residues 62 and 66, together with residue 59; residue 70; or both residues 59 and 70;

h) an antagonist of f) or g) has at least one of the following basic residues, numbered on the sequence of human mature CXCL11, is additionally substituted to Alanine,

Glycine, Serine, Threonine, Proline, Glutamic Acid, Glutamine, Aspartic Acid, or Asparagine: 5, 8, 22, 26, or 38;

i) at least one of the following basic residues of, numbered on the sequence of human mature CXCL11, is substituted to Alanine, Glycine, Serine, Threonine, Proline, Glutamic Acid, Glutamine, Aspartic Acid, or Asparagine: 46, 62, 66, or 70 the CXCR3-binding CXC chemokines is human CXCL9 and basic residue 67, numbered on the sequence of human mature CXCL11, is additionally substituted to Alanine, Glycine, Serine, Threonine, Proline, Glutamic Acid, Glutamine, Aspartic Acid, or Asparagine;

j) an antagonist as set forth in i) has the following combinations of basic residues, numbered on the sequence of human mature CXCL11, substituted to Alanine, Glycine, Serine, Threonine, Proline, Glutamic Acid, Glutamine, Aspartic Acid, or Asparagine:

  i) residue 62, together with residue 66; residue 67; or both residues 66 and 67;

  ii) residues 66 and 67; or

  iii) residues 66 and 70, together with one or more of the following: 67, 74, or 75;

k) the antagonist as set forth in i) or j) wherein at least one of the following basic residues, numbered on the sequence of human mature CXCL11, is additionally substituted to Alanine, Glycine, Serine, Threonine, Proline, Glutamic Acid, Glutamine, Aspartic Acid, or Asparagine: 5, 6, 8, 25, 28, or 38.

l) the basic residues of an antagonist as set forth in a), b), c), d), e), f), g), h), i), j), or k) is substituted with Alanine or Glycine;

m) said antagonist comprises CXCL11-2B3 (SEQ ID NO: 3), CXCL11-3B3 (SEQ ID NO: 4), or CXCL11-4B4 (SEQ ID NO: 5);

n) an antagonist as set forth in a), b), c), d), e), f), g), h), i), j), k), l) or m) wherein one or more amino acids that have been added, deleted, or substituted belong to the first nine amino acids in the amino-terminal domain of the human mature CXCR3-binding CXC chemokine;

o) an antagonist as set forth in a), b), c), d), e), f), g), h), i), j), k), l), m) or n) one or more amino acids have been mutated to decrease the aggregation properties of said antagonist;

p) said antagonist comprises a peptide mimetic designed on the sequence, structure or both sequence and structure of an antagonist as set forth in a), b), c), d), e), f), g), h), i), j), k), l), m), n) or o); or

q) said antagonist is an active fraction, precursor, salt, or derivative of an antagonists of CXCR3-binding CXC chemokines as set forth in an antagonist as set forth in a), b), c), d), e), f), g), h), i), j), k), l), m), n), o) or p).

48 (New). The method according to claim 46, wherein said active ingredient is a host cell comprising an expression vector comprising a nucleic acid sequence encoding an antagonist of CXCR3-binding CXC chemokines consisting of mutants of CXCL11, CXCL10, or CXCL9 in which:

a) at least one of the following basic residues of, numbered on the sequence of human mature CXCL11, is substituted to Alanine, Glycine, Serine, Threonine, Proline, Glutamic Acid, Glutamine, Aspartic Acid, or Asparagine: 46, 62, 66, or 70;

b) at least one of the following basic residues, numbered on the sequence of human mature CXCL11, is substituted to Alanine, Glycine, Serine, Threonine, Proline, Glutamic Acid, Glutamine, Aspartic Acid, or Asparagine: 46, 62, 66, or 70 and at least one of the following basic residues, numbered on the sequence of human mature CXCL11, is additionally substituted to Alanine, Glycine, Serine, Threonine, Proline, Glutamic Acid, Glutamine, Aspartic Acid, or Asparagine: 49, 52, 57, 59, 67, or 71;

c) one of the following combinations of basic residues, numbered on the sequence of human mature CXCL11, is substituted to Alanine, Glycine, Serine, Threonine, Proline, Glutamic Acid, Glutamine, Aspartic Acid, or Asparagine:

i) 46, together with residue 49; residue 52; or residues 49 and 52;

ii) 62, together with residue 57; residue 59; or residues 57 and 59;

iii) 66 and 70, together with residue 67; residue 71; or residues 67 and 71; or

iv) 62 and 66, together with one or more of the following residues: 57, 59, 67, 70, or 71;

d) at least one of the following basic residues, numbered on the sequence of human mature CXCL11, of an antagonist set forth in b) or c) is additionally substituted to Alanine, Glycine, Serine, Threonine, Proline, Glutamic Acid, Glutamine, Aspartic Acid, or Asparagine: 5, 6, 8, 17, 20, 26 or 38;

e) the CXCR3-binding CXC chemokine is human CXCL10 and at least one of the following basic residues, numbered on the sequence of human mature CXCL11, is additionally substituted to Alanine, Glycine, Serine, Threonine, Proline, Glutamic Acid, Glutamine, Aspartic Acid, or Asparagine: 47, 48, 51, 52, 59, 74, or 75;

f) at least one of the following basic residues of, numbered on the sequence of human mature CXCL11, is substituted to Alanine, Glycine, Serine, Threonine, Proline, Glutamic Acid, Glutamine, Aspartic Acid, or Asparagine: 46, 62, 66, or 70 and the CXCR3-binding CXC chemokine is human CXCL10 and at least one of the following basic residues, numbered on the sequence of human mature CXCL11, is additionally substituted to Alanine, Glycine, Serine, Threonine, Proline, Glutamic Acid, Glutamine, Aspartic Acid, or Asparagine: 47, 48, 51, 52, 59, 74, or 75;

g) an antagonist of f) has one of the following combinations of basic residues, numbered on the sequence of human mature CXCL11, is substituted to Alanine, Glycine, Serine, Threonine, Proline, Glutamic Acid, Glutamine, Aspartic Acid, or Asparagine:

i) residues 46 and 52, together with residue 47, 48, or 51;

ii) residues 59 and 62;

iii) residues 66 and 70, together with residue 74; residue 75; or both residues 74 and 75; or

iv) residues 62 and 66, together with residue 59; residue 70; or both residues 59 and 70;

h) an antagonist of f) or g) has at least one of the following basic residues, numbered on the sequence of human mature CXCL11, is additionally substituted to Alanine,

Glycine, Serine, Threonine, Proline, Glutamic Acid, Glutamine, Aspartic Acid, or Asparagine: 5, 8, 22, 26, or 38;

i) at least one of the following basic residues of, numbered on the sequence of human mature CXCL11, is substituted to Alanine, Glycine, Serine, Threonine, Proline, Glutamic Acid, Glutamine, Aspartic Acid, or Asparagine: 46, 62, 66, or 70 the CXCR3-binding CXC chemokines is human CXCL9 and basic residue 67, numbered on the sequence of human mature CXCL11, is additionally substituted to Alanine, Glycine, Serine, Threonine, Proline, Glutamic Acid, Glutamine, Aspartic Acid, or Asparagine;

j) an antagonist as set forth in i) has the following combinations of basic residues, numbered on the sequence of human mature CXCL11, substituted to Alanine, Glycine, Serine, Threonine, Proline, Glutamic Acid, Glutamine, Aspartic Acid, or Asparagine:

  i) residue 62, together with residue 66; residue 67; or both residues 66 and 67;

  ii) residues 66 and 67; or

  iii) residues 66 and 70, together with one or more of the following: 67, 74, or 75;

k) the antagonist as set forth in i) or j) wherein at least one of the following basic residues, numbered on the sequence of human mature CXCL11, is additionally substituted to Alanine, Glycine, Serine, Threonine, Proline, Glutamic Acid, Glutamine, Aspartic Acid, or Asparagine: 5, 6, 8, 25, 28, or 38.

l) the basic residues of an antagonist as set forth in a), b), c), d), e), f), g), h), i), j), or k) is substituted with Alanine or Glycine;

m) said antagonist comprises CXCL11-2B3 (SEQ ID NO: 3), CXCL11-3B3 (SEQ ID NO: 4), or CXCL11-4B4 (SEQ ID NO: 5);

n) an antagonist as set forth in a), b), c), d), e), f), g), h), i), j), k), l) or m) wherein one or more amino acids that have been added, deleted, or substituted belong to the first nine amino acids in the amino-terminal domain of the human mature CXCR3-binding CXC chemokine;

o) an antagonist as set forth in a), b), c), d), e), f), g), h), i), j), k), l), m) or n) one or more amino acids have been mutated to decrease the aggregation properties of said antagonist; or

p) said antagonist comprises a peptide mimetic designed on the sequence, structure or both sequence and structure of an antagonist as set forth in a), b), c), d), e), f), g), h), i), j), k), l), m), n) or o).

49 (New). The method according to claim 46, wherein said active ingredient is a nucleic acid sequence encoding an antagonist of CXCR3-binding CXC chemokines consisting of mutants of CXCL11, CXCL10, or CXCL9 in which:

a) at least one of the following basic residues of, numbered on the sequence of human mature CXCL11, is substituted to Alanine, Glycine, Serine, Threonine, Proline, Glutamic Acid, Glutamine, Aspartic Acid, or Asparagine: 46, 62, 66, or 70;

b) at least one of the following basic residues, numbered on the sequence of human mature CXCL11, is substituted to Alanine, Glycine, Serine, Threonine, Proline, Glutamic Acid, Glutamine, Aspartic Acid, or Asparagine: 46, 62, 66, or 70 and at least one of the following basic residues, numbered on the sequence of human mature CXCL11, is additionally substituted to Alanine, Glycine, Serine, Threonine, Proline, Glutamic Acid, Glutamine, Aspartic Acid, or Asparagine: 49, 52, 57, 59, 67, or 71;

c) one of the following combinations of basic residues, numbered on the sequence of human mature CXCL11, is substituted to Alanine, Glycine, Serine, Threonine, Proline, Glutamic Acid, Glutamine, Aspartic Acid, or Asparagine:

i) 46, together with residue 49; residue 52; or residues 49 and 52;

ii) 62, together with residue 57; residue 59; or residues 57 and 59;

iii) 66 and 70, together with residue 67; residue 71; or residues 67 and 71; or

iv) 62 and 66, together with one or more of the following residues: 57, 59, 67, 70, or 71;

d) at least one of the following basic residues, numbered on the sequence of human mature CXCL11, of an antagonist set forth in b) or c) is additionally substituted to

Alanine, Glycine, Serine, Threonine, Proline, Glutamic Acid, Glutamine, Aspartic Acid, or Asparagine: 5, 6, 8, 17, 20, 26 or 38;

e) the CXCR3-binding CXC chemokine is human CXCL10 and at least one of the following basic residues, numbered on the sequence of human mature CXCL11, is additionally substituted to Alanine, Glycine, Serine, Threonine, Proline, Glutamic Acid, Glutamine, Aspartic Acid, or Asparagine: 47, 48, 51, 52, 59, 74, or 75;

f) at least one of the following basic residues of, numbered on the sequence of human mature CXCL11, is substituted to Alanine, Glycine, Serine, Threonine, Proline, Glutamic Acid, Glutamine, Aspartic Acid, or Asparagine: 46, 62, 66, or 70 and the CXCR3-binding CXC chemokine is human CXCL10 and at least one of the following basic residues, numbered on the sequence of human mature CXCL11, is additionally substituted to Alanine, Glycine, Serine, Threonine, Proline, Glutamic Acid, Glutamine, Aspartic Acid, or Asparagine: 47, 48, 51, 52, 59, 74, or 75;

g) an antagonist of f) has one of the following combinations of basic residues, numbered on the sequence of human mature CXCL11, is substituted to Alanine, Glycine, Serine, Threonine, Proline, Glutamic Acid, Glutamine, Aspartic Acid, or Asparagine:

   i) residues 46 and 52, together with residue 47, 48, or 51;

   ii) residues 59 and 62;

   iii) residues 66 and 70, together with residue 74; residue 75; or both residues 74 and 75; or

   iv) residues 62 and 66, together with residue 59; residue 70; or both residues 59 and 70;

h) an antagonist of f) or g) has at least one of the following basic residues, numbered on the sequence of human mature CXCL11, is additionally substituted to Alanine, Glycine, Serine, Threonine, Proline, Glutamic Acid, Glutamine, Aspartic Acid, or Asparagine: 5, 8, 22, 26, or 38;

i) at least one of the following basic residues of, numbered on the sequence of human mature CXCL11, is substituted to Alanine, Glycine, Serine, Threonine, Proline, Glutamic Acid, Glutamine, Aspartic Acid, or Asparagine: 46, 62, 66, or 70 the

CXCR3-binding CXC chemokines is human CXCL9 and basic residue 67, numbered on the sequence of human mature CXCL11, is additionally substituted to Alanine, Glycine, Serine, Threonine, Proline, Glutamic Acid, Glutamine, Aspartic Acid, or Asparagine;

j) an antagonist as set forth in i) has the following combinations of basic residues, numbered on the sequence of human mature CXCL11, substituted to Alanine, Glycine, Serine, Threonine, Proline, Glutamic Acid, Glutamine, Aspartic Acid, or Asparagine:

i) residue 62, together with residue 66; residue 67; or both residues 66 and 67;

ii) residues 66 and 67; or

iii) residues 66 and 70, together with one or more of the following: 67, 74, or 75;

k) the antagonist as set forth in i) or j) wherein at least one of the following basic residues, numbered on the sequence of human mature CXCL11, is additionally substituted to Alanine, Glycine, Serine, Threonine, Proline, Glutamic Acid, Glutamine, Aspartic Acid, or Asparagine: 5, 6, 8, 25, 28, or 38.

l) the basic residues of an antagonist as set forth in a), b), c), d), e), f), g), h), i), j), or k) is substituted with Alanine or Glycine;

m) said antagonist comprises CXCL11-2B3 (SEQ ID NO: 3), CXCL11-3B3 (SEQ ID NO: 4), or CXCL11-4B4 (SEQ ID NO: 5);

n) an antagonist as set forth in a), b), c), d), e), f), g), h), i), j), k), l) or m) wherein one or more amino acids that have been added, deleted, or substituted belong to the first nine amino acids in the amino-terminal domain of the human mature CXCR3-binding CXC chemokine;

o) an antagonist as set forth in a), b), c), d), e), f), g), h), i), j), k), l), m) or n) one or more amino acids have been mutated to decrease the aggregation properties of said antagonist; or

p) said antagonist comprises a peptide mimetic designed on the sequence, structure or both sequence and structure of an antagonist as set forth in a), b), c), d), e), f), g), h), i), j), k), l), m), n) or o).

50 (New). The method according to claim 46, wherein said disease is selected from the group consisting of: diseases related to excessive leukocyte migration and activation; inflammatory disease; autoimmune disease; an infection; multiple sclerosis; rheumatoid arthritis; HIV-1 infection; type I diabetes; graft rejection; diseases requiring an increase of vascularization; ischemic heart disease; cancer

51 (New). A method of making an antagonist of CXCR3-binding CXC chemokines comprising culturing a transformed host cell comprising:

1) an expression vector comprising a nucleic acid sequence encoding an antagonist of CXCR3-binding CXC chemokines consisting of mutants of CXCL11, CXCL10, or CXCL9 in which:
   a) at least one of the following basic residues of, numbered on the sequence of human mature CXCL11, is substituted to Alanine, Glycine, Serine, Threonine, Proline, Glutamic Acid, Glutamine, Aspartic Acid, or Asparagine: 46, 62, 66, or 70;
   b) at least one of the following basic residues, numbered on the sequence of human mature CXCL11, is substituted to Alanine, Glycine, Serine, Threonine, Proline, Glutamic Acid, Glutamine, Aspartic Acid, or Asparagine: 46, 62, 66, or 70 and at least one of the following basic residues, numbered on the sequence of human mature CXCL11, is additionally substituted to Alanine, Glycine, Serine, Threonine, Proline, Glutamic Acid, Glutamine, Aspartic Acid, or Asparagine: 49, 52, 57, 59, 67, or 71;
   c) one of the following combinations of basic residues, numbered on the sequence of human mature CXCL11, is substituted to Alanine, Glycine, Serine, Threonine, Proline, Glutamic Acid, Glutamine, Aspartic Acid, or Asparagine:
      i) 46, together with residue 49; residue 52; or residues 49 and 52;
      ii) 62, together with residue 57; residue 59; or residues 57 and 59;
      iii) 66 and 70, together with residue 67; residue 71; or residues 67 and 71; or
      iv) 62 and 66, together with one or more of the following residues: 57, 59, 67, 70, or 71;

d) at least one of the following basic residues, numbered on the sequence of human mature CXCL11, of an antagonist set forth in b) or c) is additionally substituted to Alanine, Glycine, Serine, Threonine, Proline, Glutamic Acid, Glutamine, Aspartic Acid, or Asparagine: 5, 6, 8, 17, 20, 26 or 38;

e) the CXCR3-binding CXC chemokine is human CXCL10 and at least one of the following basic residues, numbered on the sequence of human mature CXCL11, is additionally substituted to Alanine, Glycine, Serine, Threonine, Proline, Glutamic Acid, Glutamine, Aspartic Acid, or Asparagine: 47, 48, 51, 52, 59, 74, or 75;

f) at least one of the following basic residues of, numbered on the sequence of human mature CXCL11, is substituted to Alanine, Glycine, Serine, Threonine, Proline, Glutamic Acid, Glutamine, Aspartic Acid, or Asparagine: 46, 62, 66, or 70 and the CXCR3-binding CXC chemokine is human CXCL10 and at least one of the following basic residues, numbered on the sequence of human mature CXCL11, is additionally substituted to Alanine, Glycine, Serine, Threonine, Proline, Glutamic Acid, Glutamine, Aspartic Acid, or Asparagine: 47, 48, 51, 52, 59, 74, or 75;

g) an antagonist of f) has one of the following combinations of basic residues, numbered on the sequence of human mature CXCL11, is substituted to Alanine, Glycine, Serine, Threonine, Proline, Glutamic Acid, Glutamine, Aspartic Acid, or Asparagine:

   i) residues 46 and 52, together with residue 47, 48, or 51;

   ii) residues 59 and 62;

   iii) residues 66 and 70, together with residue 74; residue 75; or both residues 74 and 75; or

   iv) residues 62 and 66, together with residue 59; residue 70; or both residues 59 and 70;

h) an antagonist of f) or g) has at least one of the following basic residues, numbered on the sequence of human mature CXCL11, is additionally substituted to Alanine, Glycine, Serine, Threonine, Proline, Glutamic Acid, Glutamine, Aspartic Acid, or Asparagine: 5, 8, 22, 26, or 38;

i) at least one of the following basic residues of, numbered on the sequence of human mature CXCL11, is substituted to Alanine, Glycine, Serine, Threonine, Proline, Glutamic Acid, Glutamine, Aspartic Acid, or Asparagine: 46, 62, 66, or 70 the CXCR3-binding CXC chemokines is human CXCL9 and basic residue 67, numbered on the sequence of human mature CXCL11, is additionally substituted to Alanine, Glycine, Serine, Threonine, Proline, Glutamic Acid, Glutamine, Aspartic Acid, or Asparagine;

j) an antagonist as set forth in i) has the following combinations of basic residues, numbered on the sequence of human mature CXCL11, substituted to Alanine, Glycine, Serine, Threonine, Proline, Glutamic Acid, Glutamine, Aspartic Acid, or Asparagine:

  i) residue 62, together with residue 66; residue 67; or both residues 66 and 67;

  ii) residues 66 and 67; or

  iii) residues 66 and 70, together with one or more of the following: 67, 74, or 75;

k) the antagonist as set forth in i) or j) wherein at least one of the following basic residues, numbered on the sequence of human mature CXCL11, is additionally substituted to Alanine, Glycine, Serine, Threonine, Proline, Glutamic Acid, Glutamine, Aspartic Acid, or Asparagine: 5, 6, 8, 25, 28, or 38.

l) the basic residues of an antagonist as set forth in a), b), c), d), e), f), g), h), i), j), or k) is substituted with Alanine or Glycine;

m) said antagonist comprises CXCL11-2B3 (SEQ ID NO: 3), CXCL11-3B3 (SEQ ID NO: 4), or CXCL11-4B4 (SEQ ID NO: 5);

n) an antagonist as set forth in a), b), c), d), e), f), g), h), i), j), k), l) or m) wherein one or more amino acids that have been added, deleted, or substituted belong to the first nine amino acids in the amino-terminal domain of the human mature CXCR3-binding CXC chemokine;

o) an antagonist as set forth in a), b), c), d), e), f), g), h), i), j), k), l), m) or n) one or more amino acids have been mutated to decrease the aggregation properties of said antagonist; or

p) said antagonist comprises a peptide mimetic designed on the sequence, structure or both sequence and structure of an antagonist as set forth in a), b), c), d), e), f), g), h), i), j), k), l), m), n) or o); and

2) collecting the expressed proteins.